<u>ABSTRACT</u>

This method comprises the steps of:

- b) simulating at least a transient operational occurrence of the nuclear reactor,
- c) calculating the value reached by a physical quantity during the transient operational occurrence in at least a cladding (33) of a fuel rod (24) of the reactor and
- d) establishing, as a limit value of an operational parameter of the reactor, the value of the operational parameter when the value calculated in step c) corresponds to a value of the physical quantity which characterizes a failure of the cladding (33).

Figure 3.